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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,751

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Ralf Krannich

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EXAMINER

LEBASSI, AMANUEL

ART UNIT

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2617

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/573,751	<b>Applicant(s)</b> KRANNICH ET AL.	
	<b>Examiner</b> AMANUEL LEBASSI	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "ENHANCING CELL RESOLUTION MOBILE POSITIONING ESTIMATES VIA SIGNAL STRENGTH MEASUREMENT REPORTED BY THE MOBILE STATION".

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-28 are rejected under 35 U.S.C. 102(a) as being unpatentable by Laiho-Steffens et al WO 98/15149 in view of MacDonald et al. US 20040152471.

Regarding claim 11, Laiho-Steffens teaches a method for estimating the position of a subscriber station (page 2, lines 27; where the location of the mobile station is estimated) in a radio communication system, comprising: receiving reports from the subscriber station at a receive station (page 2, lines 23-31), each report containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station

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(page 2, lines 23-31) and sent by a transmitting station (page 2, lines 23-31); storing the reports in a memory of a network device of the radio communication system (page 9, lines 10-18); receiving a request for position estimation at the radio communication system (page 3, lines 11-13) . Laiho-Steffens discloses estimating the position at a position determining unit taking into account at least one report stored prior to the request for position estimation.

Laiho-Steffens fails to disclose taking into account at least two reports. However MacDonald discloses taking into account at least two reports (paragraph [0014] and [0091] where comparison is made with at least two reported received signal strength values with at least two predetermined received strength values).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the inventions of Laiho-Steffens, and taking into account at least two reports as disclosed by MacDonald, thereby making more accurate position determinations as discusses by MacDonald (paragraph [0011]).

Regarding claim 12, Laiho-Steffens teaches wherein the receive station is used as the network device (page 9, line 10, wherein unit 230 user interface).

Regarding claim 13, Laiho-Steffens teaches wherein the reports are received and/or stored regularly at specific time intervals (page 9, lines 10-15).

Regarding claim 14, MacDonald discloses wherein the reports are received and stored regularly at specific time intervals, and the reports are received and stored during both an active connection and in an idle mode (paragraph [0012]).

Regarding claim 15, MacDonald discloses wherein the memory stores a first number of reports as a maximum (paragraph [0046]).

Regarding claim 16, MacDonald discloses wherein the position determining unit requests a second number of reports from the network device (paragraph [0014]).

Regarding claim 17, MacDonald discloses wherein if the number of reports stored is fewer than the second number when the request for position estimation is received, then the network device stores additional reports until the second number of reports has been stored or until a maximum period of time has expired (paragraph [0014]), if the second number of reports is stored before expiration of the maximum period of time, then the network device sends the second number of reports prior to the expiry of the maximum period of time (paragraph [0091]), and if the second number of reports cannot be stored before expiration of the maximum period of time, then the base station sends all stored reports after the

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expiry of the maximum period of time, even if the number of stored reports remains smaller than the second number of reports (paragraph [0091]).

Regarding claim 18, MacDonald discloses wherein the position determining unit estimates position by comparing signal strengths obtained from the reports with signal strengths stored in a signal strength database (paragraph [0012]).

Regarding claim 19, MacDonald discloses wherein each report also contains information relating to a transmitting power used to transmit the at least one receive signal (paragraph [0091]).

Regarding claim 20, MacDonald discloses wherein the reports also contain: a transmitting power used by the subscriber station to transmit the report to the receive station (paragraph [0091]), and a receive power at which each report was received by the receive station in each case (paragraph [0112]).

Regarding claim 21, MacDonald discloses wherein the reports are received and stored regularly at specific time intervals, and the reports are received and stored during both an active connection and in an idle mode (paragraph [00120 and [0112]).

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Regarding claim 22, MacDonald discloses wherein the memory stores a first number of reports as a maximum (paragraph [0046]).

Regarding claim 23, MacDonald discloses wherein the position determining unit requests a second number of reports from the network device (paragraph [0014]).

Regarding claim 24, MacDonald discloses wherein if the number of reports stored is fewer than the second number when the request for position estimation is received, then the network device stores additional reports until the second number of reports has been stored or until a maximum period of time has expired (paragraph [0014]), if the second number of reports is stored before expiration of the maximum period of time, then the network device sends the second number of reports prior to the expiry of the maximum period of time, and if the second number of reports cannot be stored before expiration of the maximum period of time (paragraph [0091]), then the base station sends all stored reports after the expiry of the maximum period of time, even if the number of stored reports remains smaller than the second number of reports (paragraph [0091]).

Regarding claim 25, MacDonald discloses wherein the position determining unit estimates position by comparing signal strengths obtained from the reports with signal strengths stored in a signal strength database (paragraph [0012]).

Regarding claim 26, MacDonald discloses wherein each report also contains information relating to a transmitting power used to transmit the at least one receive signal (paragraph [0091]).

Regarding claim 27, MacDonald discloses wherein the reports also contain: a transmitting power used by the subscriber station to transmit the report to the receive station (paragraph [0091]), and a receive power at which each report was received by the receive station in each case (paragraph [0112]).

Regarding claim 28, Laiho-Steffens discloses a network device (page 2, lines 34-35; radio network system) for a radio communication system, comprising: a memory, for storing the reports, which a receive station has received from a subscriber station, in which the reports in each case contain information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station (page 2, lines 23-31). MacDonald teaches a transmitter to transmit, after a request for position estimation has been received at the radio communication system, at least two reports stored prior to receiving the request for position estimation, the reports being transmitted to a position determining unit, in which the position is estimated taking into account the at least two reports (paragraph [0091]) and a controller to control the network device so that at least two reports are stored



prior to the request for position estimation (paragraph [0091] and [0099]). The motivation would be to provide a mobile location estimate by comparing reported attachment signal strength values (abstract).

### ***Conclusion***

1. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Amanuel Lebassi, whose telephone number is (571) 270-5303. The Examiner can normally be reached on Monday-Thursday from 8:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Nick Corsaro can be reached at (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Amanuel Lebassi*

/A. L./

09092009

/NICK CORSARO/

Supervisory Patent Examiner, Art Unit 2617